



#4

SEQUENCE LISTING

<110> Petrini, John H.J.  
Morgan, William Franklin  
Maser, Richard Scott  
Carney, James Patrick

<120> DNA Encoding A DNA Repair Protein

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<141> 1998-04-27

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<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

<400> 2

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Ile	Leu	Ile	Glu	Asn	Asp	Gln	Ser	Ile	Ser	Arg	Asn	His	Ala	Val	Leu
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Thr	Ala	Asn	Phe	Ser	Val	Thr	Asn	Leu	Ser	Gln	Thr	Asp	Glu	Ile	Pro
			50					55					60		
Val	Leu	Thr	Leu	Lys	Asp	Asn	Ser	Lys	Tyr	Gly	Thr	Phe	Val	Asn	Glu
			65					70					75		80
Glu	Lys	Met	Gln	Asn	Gly	Phe	Ser	Arg	Thr	Leu	Lys	Ser	Gly	Asp	Gly

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Leu Val Ala Cys Ser Ser Cys Leu Asp Val Ser Gly Lys Thr Ala Leu					
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Asn Gln Ala Ile Leu Gln Leu Gly Gly Phe Thr Val Asn Asn Trp Thr					
	130		135		140
Glu Glu Cys Thr His Leu Val Met Val Ser Val Lys Val Thr Ile Lys					
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Thr Ile Cys Ala Leu Ile Cys Gly Arg Pro Ile Val Lys Pro Glu Tyr					
	165		170		175
Phe Thr Glu Phe Leu Lys Ala Val Gln Ser Lys Lys Gln Pro Pro Gln					
	180		185		190
Ile Glu Ser Phe Tyr Pro Pro Leu Asp Glu Pro Ser Ile Gly Ser Lys					
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Glu Glu Glu His Asn Phe Phe Leu Ala Pro Gly Thr Cys Val Val Asp					
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Thr Gly Ile Thr Asn Ser Gln Thr Leu Ile Pro Asp Cys Gln Lys Lys					
	275		280		285
Trp Ile Gln Ser Ile Met Asp Met Leu Gln Arg Gln Gly Leu Arg Pro					
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Ile Pro Glu Ala Glu Ile Gly Leu Ala Val Ile Phe Met Thr Thr Lys					
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Asn Tyr Cys Asp Pro Gln Gly His Pro Ser Thr Gly Leu Lys Thr Thr					
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Thr Pro Gly Pro Ser Leu Ser Gln Gly Val Ser Val Asp Glu Lys Leu					
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Met Pro Ser Ala Pro Val Asn Thr Thr Thr Tyr Val Ala Asp Thr Glu					
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Ser Glu Gln Ala Asp Thr Trp Asp Leu Ser Glu Arg Pro Lys Glu Ile					
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Lys Val Ser Lys Met Glu Gln Lys Phe Arg Met Leu Ser Gln Asp Ala					
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 Pro Thr Lys Leu Pro Ser Ile Asn Lys Ser Lys Asp Arg Ala Ser Gln  
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 Lys Arg Glu Arg Asp Glu Glu Asn Gln Glu Met Ser Ser Cys Lys Ser  
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 Glu Val Leu Glu Gln Leu Phe Lys Asp Thr Lys Pro Glu Leu Glu Ile  
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 Asp Val Lys Val Gln Lys Gln Glu Glu Asp Val Asn Val Arg Lys Arg  
 580 585 590  
 Pro Arg Met Asp Ile Glu Thr Asn Asp Thr Phe Ser Asp Glu Ala Val  
 595 600 605  
 Pro Glu Ser Ser Lys Ile Ser Gln Glu Asn Glu Ile Gly Lys Lys Arg  
 610 615 620  
 Glu Leu Lys Glu Asp Ser Leu Trp Ser Ala Lys Glu Ile Ser Asn Asn  
 625 630 635 640  
 Asp Lys Leu Gln Asp Asp Ser Glu Met Leu Pro Lys Lys Leu Leu Leu  
 645 650 655  
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 Ser Gly Ile Asn Asp Asp Tyr Gly Gln Leu Lys Asn Phe Lys Lys Phe  
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 Lys Lys Val Thr Tyr Pro Gly Ala Gly Lys Leu Pro His Ile Ile Gly  
 690 695 700  
 Gly Ser Asp Leu Ile Ala His His Ala Arg Lys Asn Thr Glu Leu Glu



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 Lys Ser Ile Ser Arg Gln His Ile Thr Phe Lys Trp Glu Ile Asn Asn  
                   20                    25                    30  
 Ser Ser Asp Leu Lys His Ser Ser Leu Cys Leu Val Asn Lys Gly Lys  
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 Leu Thr Ser Leu Asn Lys Lys Phe Met Lys Val Gly Glu Thr Phe Thr  
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 Gly Asn Asp Thr Phe Val Thr Leu Asp Glu Ile Leu Arg Leu Ala Gln  
                   35                    40                    45  
 Glu Asn Glu Val Asp Phe Ile Leu Leu Gly Gly Asp Leu Phe His Glu  
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 Asn Lys Pro Ser Arg Lys Thr Leu His Thr Cys Leu Glu Leu Leu Arg  
 65                    70                    75                    80  
 Lys Tyr Cys Met Gly Asp Arg Pro Val Gln Phe Glu Ile Leu Ser Asp  
                   85                    90                    95

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Asp Gly Asn Leu Asn Ile Ser Ile Pro Val Phe Ser Ile His Gly Asn			
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His Asp Asp Pro Thr Gly Ala Asp Ala Leu Cys Ala Leu Asp Ile Leu			
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Ser Cys Ala Gly Phe Val Asn His Phe Gly Arg Ser Met Ser Val Glu			
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Lys Ile Asp Ile Ser Pro Val Leu Leu Gln Lys Gly Ser Thr Lys Ile			
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Ala Leu Tyr Gly Leu Gly Ser Ile Pro Asp Glu Arg Leu Tyr Arg Met			
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Phe Val Asn Lys Lys Val Thr Met Leu Arg Pro Lys Glu Asp Glu Asn			
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Ser Trp Phe Asn Leu Phe Val Ile His Gln Asn Arg Ser Lys His Gly			
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Ser Thr Asn Phe Ile Pro Glu Gln Phe Leu Asp Asp Phe Ile Asp Leu			
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Val Ile Trp Gly His Glu His Glu Cys Lys Ile Ala Pro Thr Lys Asn			
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Glu Gln Gln Leu Phe Tyr Ile Ser Gln Pro Gly Ser Ser Val Val Thr			
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Ser Leu Ser Pro Gly Glu Ala Val Lys Lys His Val Gly Leu Leu Arg			
275	280	285	
Ile Lys Gly Arg Lys Met Asn Met His Lys Ile Pro Leu His Thr Val			
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Arg Gln Phe Phe Met Glu Asp Ile Val Leu Ala Asn His Pro Asp Ile			
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Phe Asn Pro Asp Asn Pro Lys Val Thr Gln Ala Ile Gln Ser Phe Cys			
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Leu Glu Lys Ile Glu Glu Met Leu Glu Asn Ala Glu Arg Glu Arg Leu			
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Tyr Ser Gly Gly Phe Glu Pro Phe Ser Val Leu Arg Phe Ser Gln Lys			
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His Arg Glu Gln Lys Glu Lys Thr Gly Glu Glu Ile Asn Phe Gly Lys			



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<212> DNA

<213> Homo sapiens

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			20					25					30		
Gly	Asn	Asp	Thr	Phe	Val	Thr	Leu	Asp	Glu	Ile	Leu	Arg	Leu	Ala	Gln
		35					40					45			
Glu	Asn	Glu	Val	Asp	Phe	Ile	Leu	Leu	Gly	Gly	Asp	Leu	Phe	His	Glu
	50					55					60				
Asn	Lys	Pro	Ser	Arg	Lys	Thr	Leu	His	Thr	Cys	Leu	Glu	Leu	Leu	Arg
65					70					75					80
Lys	Tyr	Cys	Met	Gly	Asp	Arg	Pro	Val	Gln	Phe	Glu	Ile	Leu	Ser	Asp
				85					90					95	
Gln	Ser	Val	Asn	Phe	Gly	Phe	Ser	Lys	Phe	Pro	Trp	Val	Asn	Tyr	Gln
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Asp	Gly	Asn	Leu	Asn	Ile	Ser	Ile	Pro	Val	Phe	Ser	Ile	His	Gly	Asn
		115					120					125			
His	Asp	Asp	Pro	Thr	Gly	Ala	Asp	Ala	Leu	Cys	Ala	Leu	Asp	Ile	Leu
		130				135					140				
Ser	Cys	Ala	Gly	Phe	Val	Asn	His	Phe	Gly	Arg	Ser	Met	Ser	Val	Glu
145					150					155					160
Lys	Ile	Asp	Ile	Ser	Pro	Val	Leu	Leu	Gln	Lys	Gly	Ser	Thr	Lys	Ile
				165					170					175	
Ala	Leu	Tyr	Gly	Leu	Gly	Ser	Ile	Pro	Asp	Glu	Arg	Leu	Tyr	Arg	Met
			180					185					190		
Phe	Val	Asn	Lys	Lys	Val	Thr	Met	Leu	Arg	Pro	Lys	Glu	Asp	Glu	Asn
		195					200					205			
Ser	Trp	Phe	Asn	Leu	Phe	Val	Ile	His	Gln	Asn	Arg	Ser	Lys	His	Gly
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Ser	Thr	Asn	Phe	Ile	Pro	Glu	Gln	Phe	Leu	Asp	Asp	Phe	Ile	Asp	Leu
225				230						235					240
Val	Ile	Trp	Gly	His	Glu	His	Glu	Cys	Lys	Ile	Ala	Pro	Thr	Lys	Asn
				245					250					255	
Glu	Gln	Gln	Leu	Phe	Tyr	Ile	Ser	Gln	Pro	Gly	Ser	Ser	Val	Val	Thr

	260		265		270										
Ser	Leu	Ser	Pro	Gly	Glu	Ala	Val	Lys	Lys	His	Val	Gly	Leu	Leu	Arg
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Ile	Lys	Gly	Arg	Lys	Met	Asn	Met	His	Lys	Ile	Pro	Leu	His	Thr	Val
	290					295						300			
Arg	Gln	Phe	Phe	Met	Glu	Asp	Ile	Val	Leu	Ala	Asn	His	Pro	Asp	Ile
305					310					315				320	
Phe	Asn	Pro	Asp	Asn	Pro	Lys	Val	Thr	Gln	Ala	Ile	Gln	Ser	Phe	Cys
			325						330					335	
Leu	Glu	Lys	Ile	Glu	Glu	Met	Leu	Glu	Asn	Ala	Glu	Arg	Glu	Arg	Leu
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Gly	Asn	Ser	His	Gln	Pro	Glu	Lys	Pro	Leu	Val	Arg	Leu	Arg	Val	Asp
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Tyr	Ser	Gly	Gly	Phe	Glu	Pro	Phe	Ser	Val	Leu	Arg	Phe	Ser	Gln	Lys
	370					375					380				
Phe	Val	Asp	Arg	Val	Ala	Asn	Pro	Lys	Asp	Ile	Ile	His	Phe	Phe	Arg
385					390					395				400	
His	Arg	Glu	Gln	Lys	Glu	Lys	Thr	Gly	Glu	Glu	Ile	Asn	Phe	Gly	Lys
			405						410					415	
Leu	Ile	Thr	Lys	Pro	Ser	Glu	Gly	Thr	Thr	Leu	Arg	Val	Glu	Asp	Leu
		420						425					430		
Val	Lys	Gln	Tyr	Phe	Gln	Thr	Ala	Glu	Lys	Asn	Val	Gln	Leu	Ser	Leu
	435						440						445		
Leu	Thr	Glu	Arg	Gly	Met	Gly	Glu	Ala	Val	Gln	Glu	Phe	Val	Asp	Lys
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Glu	Glu	Lys	Asp	Ala	Ile	Glu	Glu	Leu	Val	Lys	Tyr	Gln	Leu	Glu	Lys
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Thr	Gln	Arg	Phe	Leu	Lys	Glu	Arg	His	Ile	Asp	Ala	Leu	Glu	Asp	Lys
			485						490					495	
Ile	Asp	Glu	Glu	Val	Arg	Arg	Phe	Arg	Glu	Thr	Arg	Gln	Lys	Asn	Thr
		500						505					510		
Asn	Glu	Glu	Asp	Asp	Glu	Val	Arg	Glu	Ala	Met	Thr	Arg	Ala	Arg	Ala
	515						520					525			
Leu	Arg	Ser	Gln	Ser	Glu	Glu	Ser	Ala	Ser	Ala	Phe	Ser	Ala	Asp	Asp
	530					535					540				
Leu	Met	Ser	Ile	Asp	Leu	Ala	Glu	Gln	Met	Ala	Asn	Asp	Ser	Asp	Asp
545					550				555					560	
Ser	Ile	Ser	Ala	Ala	Thr	Asn	Lys	Gly	Arg	Gly	Arg	Gly	Arg	Gly	Arg
			565						570					575	

Arg Gly Gly Arg Gly Gln Asn Ser Ala Ser Arg Gly Gly Ser Gln Arg  
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 Gly Arg Ala Phe Lys Ser Thr Arg Gln Gln Pro Ser Arg Asn Val Thr  
                   595                                  600                                  605  
 Thr Lys Asn Tyr Ser Glu Val Ile Glu Val Asp Glu Ser Asp Val Glu  
                   610                                  615                                  620  
 Glu Asp Ile Phe Pro Thr Thr Ser Lys Thr Asp Gln Arg Trp Ser Ser  
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 Thr Ser Ser Ser Lys Ile Met Ser Gln Ser Gln Val Ser Lys Gly Val  
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